described him to Tyndall, but, as Mr. Courtney said in his impressive farewell address, "it must never be forgotten that his one overmastering and dominant purpose was practical, social, human." The cold agnostic, all intellect and no heart, often felt himself called upon "to suspend his work in order to try to convert Christians to Christianity," as Dr. Duncan well puts it. As old age crept on apace, and he was writing his last book, it was anxiety for the welfare of his country that alone disturbed his serenity as he pondered over "ultimate questions," and wondered "Shall I ever again be awakened at dawn by the song of the thrush?"

OCULAR PATHOLOGY.

The Pathology of the Eye. By J. Herbert Parsons. 4 vols. Vol. i., pp. xiii+388; vol. ii., pp. viii+389–770; vol. iii., pp. x+771–1128; vol. iv., pp. ix+1129–1427. (London: H. Frowde and Hodder and Stoughton, 1908.)

THE recent completion of this work, of which the first volume was published in 1904, marks an epoch in the literature of the pathology of the eye. In his preface the author states that "the object of this treatise is to give as complete an account of the pathology of the eye as is possible in the present state of our knowledge."

How closely the author has kept this object in view, and how nearly he has attained it, will be obvious to readers who are familiar with ocular pathology. In comprehensiveness, in fulness of detail, and in wealth of illustration, this treatise exhibits a notable superiority over all previous monographs on the subject.

As curator of the museum at Moorfields Eye Hospital, the author has enjoyed opportunities for pathological study and investigation which may be justly termed exceptional. Much credit is due to him for the excellent use he has made of these opportunities, and also to the hospital authorities for their enlightened policy in maintaining a laboratory in which such good and permanently valuable work can be carried on.

The need of a book such as Dr. Parsons has given us has often been felt by those engaged in the study of ophthalmology, and especially by those who are unfamiliar with languages other than English. Much good work has been done, and great advances have been made in ocular pathology during the last ten or fifteen years, but the records of these accomplishments are widely scattered in scientific journals, hospital reports, and elsewhere, and are often unobtainable by the student. No attempt has hitherto been made, at all events successfully, to produce a work dealing comprehensively with the pathology of the eye. Hence the treatise now before us supplies a real want, and will prove (indeed, has already proved) of great assistance to those interested in this branch of medical science.

The author has wisely divided his work into four parts, and has thereby given us volumes of convenient and easily portable size. We doubt if he has been as well advised in extending the publication of the volumes over so long a period as four years. As a result of this, his work has to suffer the disadvantage, common to all scientific books of protracted publication, that by the time the final volume is in print the earlier portion of the work requires revision to bring it up to date.

The plan adopted by the author has been to devote the first and second volumes to the "Pathological Histology" of the ocular tissues, and the third and fourth volumes to the "General Pathology" of the eye, this latter title having a very wide and inclusive character. This arrangement, although in many respects admirable, and possibly the most serviceable, has led to a certain amount of repetition, necessitated by the consideration of subjects under two headings. For example, if the reader wishes to look up the pathology of injuries, say, of the cornea, he will find the subject partly dealt with in the chapter on the cornea in vol. i., and partly in the chapter on injuries in vol. iv.

In vols. i. and ii. the pathological histology of the eye, eyelids, and orbit (cysts and tumours) is dealt with, each component part of the eyeball, *e.g.* the cornea, iris, lens, &c., being considered separately and very fully. As introductory to the description of the morbid histology of each structure, there is a brief but sufficient account of its normal histology. This materially enhances the usefulness of the book to those engaged in microscopic work, enabling them, without loss of time, to refresh their memory of the histology of healthy tissues, or to compare the characters of their specimens with those accepted as normal.

The bacteriology of the ocular tissues, a subject of great and increasing importance, is also included in these volumes. A brief and serviceable account is given of the established relations of micro-organisms to disease of the various ocular tissues. More than this could not reasonably be desired in a work not dealing specially with bacteriology.

The scope of vols. iii. and iv. is much wider than that of the preceding volumes, and embraces more than might naturally be expected from the title, "General Pathology of the Eye."

In addition to subjects legitimately included under this heading, vol. iii. contains a lengthy account of the normal circulation of the eye, the nutrition of the eye, and the normal intra-ocular pressure. We are unable to agree with the author's view that "it is essential to give an exhaustive account of the normal circulation and nutrition of the eye" in a work on pathology. These three chapters, excellent in themselves, are much too elaborate as an introduction to the consideration of morbid conditions, and might with advantage be greatly curtailed in future editions.

Vol. iv., in addition to chapters on injuries, orbital inflammations, sympathetic ophthalmitis, &c., contains a very instructive chapter dealing with the morbid changes in symptomatic diseases of the eye, as, for example, the ocular lesions associated

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with disease of the nervous and circulatory systems, the internal organs, &c.

Its concluding chapter is on heredity in diseases of the eye. As an introduction to this subject, the author has included a brief exposition of the Mendelian theory of inheritance, taken from a paper by Mr. R. C. Punnett, in the Proceedings of the Royal Society of Medicine.

This treatise, as we have already said, is the most complete work of its kind hitherto published. In our opinion it is an extremely valuable addition to ophthalmological literature, and one which is indispensable to all those engaged in the study of ocular pathology.

There are two special features of Dr. Parsons's book to which attention may be directed. One is the admirable way in which the author brings together and discusses the various theories which at different times have been brought forward in explanation of the pathology or pathogenesis of ocular disease. A good example of this is to be found in the chapter on sympathetic ophthalmitis.

The author's decisions appear to be strictly judicial, but he is perhaps rather lenient in reference to theories or statements which have been shown to be hardly worthy of support.

The other feature is the very full and most valuable list of references to literature provided throughout the book. Following the method of a well-known writer of travellers' guides, Dr. Parsons affixes an asterisk to the works which he believes to be most important, but, like the hotels in the guide, there is sometimes room for difference of opinion as to the merits of the "starred" articles.

In its general attributes, Dr. Parsons's work deserves commendation, and very little adverse criticism is called for. The author's literary style is usually clear and decisive, though it often lacks smoothness and elegance. It is no discredit to him that in the course of so extensive a work some pages should contain a few crude or cryptic sentences. There are but few printer's errors, but some of them ought not to have escaped notice, *e.g.* the printing of the word "sarcoma" for "glaucoma" in vol. iii., p. 1072.

The illustrations, which are very numerous, are, with few exceptions (*e.g.* several in the chapter on the retina), very satisfactory. The large majority are from photographs, and have, therefore, the merit of unquestioned fidelity, even if they are less explicit (especially in high-power reproductions) than drawings.

A careful index of illustrations and of subjects is given in vols. i., ii., and iii. Vol. iv. has an index of the subjects contained therein, but lacks an index of illustrations. In this volume there is also a general index of subjects in all four volumes, but, unfortunately, it is of little use. The value of a general index in a work of more than one volume is to enable the reader to ascertain quickly in which volume he will find the subject under discussion. It is no assistance to him to learn that it is on p. 1339, unless he is informed in which volume this page is to be found.

A STUDY IN SEAWEEDS.

Die Algenflora der Danziger Bucht, ein Beitrag zur Kenntnis der Ostseeflora. By Prof. Lakowitz. Pp. vii+141; 1 Vegetationskarte, 5 double plates of photographic illustrations of the plants, and 70 text-illustrations of structure. (Danzig, 1907, Kommissions verlag von W. Engelmann, Leipzig.)

THIS monograph is devoted to a most careful study of the marine flora (excluding diatoms) of a region which, though poor in species, affords problems of great scientific interest, more especially with respect to the origin of the flora and its comparison with those of other seas. The whole number of species determined with certainty amounted to only seventy-four, including four Characeæ, but to these must be added a few others met with only in too imperfect a state to allow of determination.

Only one species, belonging to the genus Goniotrichum, is regarded as new to science, but six varieties receive mention as previously unrecorded. The species and varieties are described as they exist in the Gulf of Danzig; their environment is noted, and their distribution within and beyond the Baltic Sea is quoted from the best works. While the descriptions, analytical keys, and figures make the first part of the monograph a valuable contribution to systematic botany, a more general interest attaches to the second part, in which are treated the relations of the flora to the environment within the bay, and to the floras of other regions. The physical configuration of the region is discussed, as well as the geological structure, and the elevations and depressions which can be traced as having occurred in the past.

There is evidence that the district lay under the Scandinavian ice-sheet for a time, and that, as the ice retreated northwards, the connection of this sea was with the cold northern seas, over sunk portions of what is now Sweden, Arctic Mollusca (*Yoldia arctica, Astarte borealis,* &c.) being characteristic of its fauna. The melting of the ice led to the formation of a sea with very cold water, poor in the usual marine salts. It appears to have been shut off from the present west part of the Baltic by a ridge passing through Bornholm. During this period probably the bulk of its fauna and flora arrived, about one-half of the Algæ showing an Arctic character. Subsequently, for a time, the eastern Baltic became a lake, to be afterwards again connected with the North Sea, but by a more southern outlet. The degree of salinity varied much in consequence of geological changes, which must have greatly affected the flora. Its poverty in species is very marked when compared with the 255 species recorded from the western Baltic, which has long been united with the North Sea, as at present. The less salinity has prevented the immigration of some species; and is probably the cause of physical peculiarities in others, such as the slender forms and smaller size. The Danzig algal flora tends to be characteristic of brackish water rather than of the sea. Several species are of

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